

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Skype Communications S.A.R.L.)	
)	
Petition to Confirm A Consumer's Right to)	RM-11361
Use Internet Communications Software and)	
Attach Devices to Wireless Networks)	
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)	

OPPOSITION OF CTIA – THE WIRELESS ASSOCIATION®

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EXECUTIVE SUMMARY

Skype Communications S.A.R.L. (“Skype”) has filed a Petition asking the Federal Communications Commission (“FCC” or “Commission”) to over-regulate an industry that, according to the Commission, is the picture of competitiveness. Skype asks the Commission to adopt regulations that would choose Skype’s business model over the benefits consumers derive from the competitive market. This is not a market that is broken. There are about 160 licensees providing mobile wireless services and more competitors are on the way as a result of the Advanced Wireless Services (“AWS”) auctions. There are numerous handset manufacturers and network equipment providers. There are also countless content providers. As evidence of this competition, CTIA hosted nearly 1,100 exhibitors at its most recent convention. These entities and more are competing to serve the over 230 million U.S. mobile wireless subscribers.

Over the last 15 years, the United States mobile wireless industry has invested more than \$214 billion in expanding and improving mobile wireless services for consumers. Over this period, competition among mobile wireless providers has intensified to the benefit of consumers. Prices have fallen, service quality has improved, and new and innovative services are constantly being introduced. Consumers also have more options – with hundreds, if not thousands of mobile wireless service plan and handset combinations available to American consumers.

There are now approximately 230 million mobile wireless subscribers in the U.S., who use their mobile devices an average of 726 minutes per month. That’s 88% more minutes than just five years ago, and an incredible 376% more minutes than the average European wireless consumer. Growing faith in mobile wireless services is reflected in

the growing percentage of households that are becoming wireless only and in independent surveys and government reports that show increasing consumer satisfaction with mobile wireless services.

The U.S. mobile wireless industry's astonishing rate of growth and investment continues today as existing and prospective mobile wireless providers are delivering the next generation of mobile broadband voice, data, and video services to consumers. Wireless carriers are not only bringing much needed competition to cable and DSL broadband services, but in some cases are bringing the only broadband services to rural areas. As the FCC reported earlier this year, in the first half of 2006, total broadband connections grew from 51.2 million to 64.6 million lines, and 59% of all additions were mobile wireless subscriptions. In addition, last year, new and existing licensees spent \$13.9 billion in the Advanced Wireless Service (“AWS”) auction. That auction created three more nationwide licensees that will compete with the existing four nationwide licensees, as well as the long list of regional licensees. Yet more competition will be created as a result of the upcoming auction of 60 MHz of 700 MHz spectrum.

The U.S. mobile wireless industry's success has been made possible, in part, by an environment of minimal regulatory intervention that has allowed licensees to manage their spectral environment and maximize innovation and efficiency both in the network and in handsets at network edges. This level of oversight is so critical because mobile wireless services are radio-based – utilizing a shared and finite resource that can be degraded by a single consumer's harmful use.

Against this backdrop, Skype is now asking the FCC to upend a regulatory model that has worked so well to date – because it does not fit into Skype's business model.

While painting a completely inaccurate picture of the wireless industry and radio-based technologies to mandate open access standards for handsets and applications, Skype asks the FCC to apply *Carterfone* regulations to the wireless industry and to inquire into the policy of bundling wireless customer premises equipment (“CPE”) with wireless service. Skype makes this request even as U.S. consumers are able to download and use Skype software on wireless devices sold by major wireless carriers and as Skype has implemented the very network security practices it complains of. According to Niklas Zennström, Founder and CEO of Skype, Skype’s network security practices are necessary “to protect the integrity of the network.” We agree.

Skype’s request to apply *Carterfone* regulation to the wireless industry is completely misplaced. Unlike the Bell System at the time of the *Carterfone* decision, the wireless industry is not dominated by a rate-regulated monopoly provider, wireless carriers do not manufacture the handsets they sell, and carriers and manufacturers do not invest in each others companies. The market for mobile wireless handsets is both competitive and innovative without regulatory intervention. Indeed, the vast majority of Americans have four or more wireless carriers competing for their subscription. And, wireless consumers have their choice of about 700 handsets with differing features, form factors, and operating systems. In this environment, it is consumers, not carriers or manufacturers, who drive service and handset decisions.

The Commission similarly should reject Skype’s short-sighted and dangerous request for the FCC to regulate open access standards for handsets and applications. Skype asks the Commission to mandate handset hardware requirements and force carriers to accept any compliant handset on their network. Skype’s request claims to promote

greater innovation in the handset market. CTIA disagrees, and argues that implementation of Skype's suggestion would significantly limit investment and innovation in new network infrastructure and services. Moreover, Skype's Petition ignores the critical role handsets play in network management and is inconsistent with the FCC's E-911 and hearing aid compatibility ("HAC") rules that impose obligations on wireless carriers with regard to handsets.

If granted, Skype's Petition would remove many of the practices carriers use to ensure that the handsets that operate on their networks are running software that protects the network and consumers' information. Skype is asking the Commission to mandate application interfaces and to regulate carriers' ability to prevent certain applications from being run on their network. Opening handsets to run any software potentially exposes wireless subscribers to a host of quality and security problems.

Lastly, Skype's Petition urges the Commission to overturn a policy that has brought consumers incredible benefits over the last 15 years. The practice of bundling wireless handsets with wireless service has lowered consumer handset costs and brought new and innovative handsets to market more quickly. In 1992, the Commission concluded that the consumer benefits of bundling services with handsets, such as lower handset costs and increased ability for carriers to more rapidly roll out advanced services and features, far outweighed any potential negative effects. Despite Skype's contentions to the contrary, the Commission's conclusions about the consumer benefits of bundling mobile wireless services with handsets remain as apt today as they were 15 years ago.

Ultimately, Skype's Petition presents solutions to problems that don't plague the wireless industry and suggests remedies that would neither benefit consumers nor the

market, but rather are designed to benefit Skype. The Commission should dismiss Skype's self-serving Petition as it not only fails to cite a legitimate market failure in the wireless market, but also fails to consider the true demands and interests of wireless consumers.

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OPPOSITION OF CTIA – THE WIRELESS ASSOCIATION®

CTIA – The Wireless Association® (“CTIA”)¹ files this opposition to the Petition for a Declaratory Ruling filed by Skype Communications S.A.R.L. (“Skype” or “Petitioner”) to establish regulations requiring competitive wireless carriers to cede management over the design, operation, and management of their networks and services.² Skype’s Petition should be dismissed. At best, Skype’s Petition is a solution in search of a problem – seeking to apply monopoly regulation to vibrantly competitive wireless markets in an attempt to use regulation to facilitate Skype’s service and specific business model. At worst, the re-regulation that Skype calls for would seriously impair wireless carriers’ ability to meet the demands of consumers.

¹ CTIA – The Wireless Association® is the international organization of the wireless communications industry for both wireless carriers and manufacturers. Membership in the organization covers Commercial Mobile Radio Service (“CMRS”) providers and manufacturers, including cellular, broadband PCS, ESMR, and AWS, as well as providers and manufacturers of wireless data services and products.

² Petition to Confirm a Consumer’s Right to Use Internet Communications Software and Attach Devices to Wireless Networks, Skype Communications S.A.R.L., RM-11361 (filed Feb. 20, 2007) (“Skype Petition”).

I. INTRODUCTION

CTIA asks the Federal Communications Commission's ("FCC" or "Commission") to deny Skype's Petition. Skype's request has no basis in fact, economics, policy, or law, and the regulations Skype seeks to impose on the wireless industry are completely incompatible with the vision and track record of the competitive, consumer-oriented marketplace that has allowed wireless to quickly become the most popular form of American telecommunication.

Despite overwhelming evidence that the wireless industry is vibrantly competitive, Skype asks the Commission to adopt regulations that would choose Skype's business model over the benefits consumers derive from a competitive market. Skype's proposed regulation is a solution in search of a problem. In reality, the wireless industry has shown time and again that its success is due not to restrictions on consumers, but rather through constant innovation to meet consumer expectations.

Section II of this Opposition details the history and success of the competitive wireless market in which consumers drive carrier offerings. This section details the level of intercarrier competition for consumers both in economic terms as well as on quality of service and services offered. Section II also details the high level of competition between handset manufacturers to meet consumers' expectations and bring new and innovative handsets to market.

Section III refutes Skype's claims that carrier practices preventing unapproved applications from being run on some handsets are thwarting innovation. Skype's criticism of this practice is particularly curious given their use of application control on their own network. Consumers are not being denied access to the applications they

desire, and are free to purchase handsets capable of running the applications they desire, so long as they are not harmful to the network in violation of their terms and conditions of service. The services and applications that consumers desire change regularly, and the competitive wireless industry changes to match those desires.

Section IV explains why network development is so important to wireless consumers. Far from being a set of “dumb pipes,” wireless networks are intelligent, innovative, and constantly evolving to meet existing consumer demand, and anticipate future advances. From analog to digital, to third- and fourth-generation, the networks constantly are being upgraded. These changes are necessary to address any development that happens at the edge of the networks. Application of the open standards that Skype requests will remove incentives for carriers to invest in networks, denying consumers the new technologies and services they desire.

Section V highlights the many differences between the wireline market of 1968, whose regulations Skype would like the Commission to adopt for wireless, and the competitive wireless market of 2007. Regulations designed to remedy a vertically integrated rate-regulated monopoly’s control over adjacent markets are inappropriate for an industry without vertical integration and characterized by strong horizontal competition in all segments of the market.

Section VI reminds everyone of the purpose of the FCC’s decision to allow bundling of wireless service with CPE and assesses the empirical evidence regarding the result of the FCC’s decision. The FCC foresaw, and history has borne out, that CPE bundling enables network builders to more quickly bring next generation networks to the public and lowers handset costs for consumers through economies of scope and scale.

The regulation Skype requests would drive up the cost of handsets to consumers and potentially freeze network innovation.

The appendices to this Opposition detail the economic, technical and policy reasons that Skype's request is wrong for consumers and ill-suited to the wireless marketplace. Appendices A and B detail the many wireless devices that currently offer consumers the options that Skype seeks to mandate through regulation. Appendix C, a technical analysis of wireless networks by Charles Jackson, shows the critical role that handsets play in wireless network efficiency and in bringing new and innovative services to consumers. Appendix D, an antitrust analysis of the claims made in the Skype Petition is provided by Willkie Farr & Gallagher. Appendices E and F focus on an economic analysis of the wireless marketplace with regard to Skype's Petition. Appendix E is provided by Robert Hahn, Robert Litan and Hal Singer of the American Enterprise Institute/Brookings Joint Center for Regulatory Studies and Appendix F is a paper released by the Phoenix Center for Advanced Legal & Economic Public Policy by George S. Ford, Thomas M. Koutsky and Lawrence J. Spiwak. Both papers address Skype's misplaced request that a net neutrality regime should be applied to wireless services.

Consumers have benefited over the last 15 years from the deregulatory environment the Commission and Congress have afforded the commercial wireless industry. Reversing course on these policies may serve Skype, but it certainly will not benefit consumers.

II. SKYPE'S PETITION FUNDAMENTALLY MISCHARACTERIZES THE STATE OF THE WIRELESS MARKETPLACE

In its Petition, Skype portrays the wireless market as closed, open only to those who are willing to “play ball with the largest wireless carriers.”³ Skype’s characterization not only belies the high level of competition between and among wireless carriers and handset manufacturers, but ascribes to carriers a level of power and control over handset design that simply doesn’t exist.

A. Wireless Carriers Compete With Other Media and Each Other for Subscribers

Over the last 15 years, the wireless industry has evolved to a highly efficient, competitive industry, and that competition has produced incredible consumer benefit. Wireless has come a long way since its days as a cellular duopoly.⁴ Currently, there are four carriers that compete nationally for wireless subscribers.⁵ Beyond the four nationwide carriers, there are more than five regional carriers and more than 140 carriers that compete in smaller markets. Carriers competing for customers include: Aeronautical Radio Inc. (ARINC), Airadigm / Einstein PCS, Airpeak (Nevada Wireless), Airtel Montana, Alaska Communications / ACS Wireless, Alaska Digitel, Alaska Wireless, All West Communications / All West Wireless, ALLTEL Communications,

³ Skype Petition at 22.

⁴ See *Bundling of Cellular Customer Premises Equipment and Cellular Service*, Report and Order, CC Docket No. 91-34, FCC 92-207, 7 FCC Rcd 4028 (“CPE Bundling Order”).

⁵ *Eleventh Annual CMRS Competition Report*, Federal Communications Commn., at ¶ 41, available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-06-142A1.pdf (last accessed Apr. 7, 2007) (“FCC Competition Report”).

American Samoa Telecommunications Authority, American Wireless License Group, AmeriLink PCS / Choice Wireless, Appalachian Wireless / East Kentucky Cellular Network, Arctic Slope Cellular (ASTAC), AT&T Mobility, Baldwin Nashville Telephone Company, Benton Linn Wireless, Blanca Telephone Company, Blue Sky Communications / American Samoa License Inc., Bluegrass Cellular, Brazos Cellular, Bristol Bay Cellular Partnership, C.C. Communications – Cellular Caprock Cellular, Carolina West Wireless, Cascade Communications, CellCom / Northeast Communications of Wisconsin, Cellular 29 Plus, Cellular One of East Texas, Cellular One of Elkins WV / Douglas Telecommunications / Easterbrooke Telecom., Cellular One of NE Arizona / Smith Bagley, Cellular One of NE Pennsylvania / South Canaan Cellular, Cellular One of San Luis Obispo, CA / Entertainment Unlimited, Cellular Properties Inc. dba Cellular One of East Central Illinois, Cellular South, Centennial Communications, Chariton Valley Wireless Services, Chinook Wireless, Cincinnati Bell Wireless, ClearTalk / NTCH / GLH Communications, Coastel Communications Company, Commnet Wireless, Community Digital Wireless, ComScape / Kiwi PCS, Copper Valley Wireless, Cordova Wireless, Corr Wireless Communications, Cross-Valliant Cellular Partnership, CTC Wireless / CT Communications, Custer Telephone Company, Danville Mutual Telephone Company, Dobson Cellular Systems, DoCoMo Guam / SaipanCell / Guam Wireless / Hafatel, DTC Communications formerly Advantage Cellular / DeKalb Telephone Coop., Dumont Telephone Company, Edge Wireless, EPIC PCS, Etex Cellular, Extend America, Farmers Mutual Cooperative Telephone Company of Harlan, IA, Farmers Wireless / Farmers Cellular Telephone, Filer Mutual Telephone Company, Five Star Wireless /

Texas RSA 15B2 Partnership, GCI Cellular, Golden State Cellular, GTE Pacifica / Pacific Telecommunications, Guam Telephone Authority / TeleGuam Holdings / Pulse Mobile, Hargray Communications, Illinois Valley Cellular, Immix Wireless / Keystone Wireless, Indigo Wireless of Pennsylvania and Nebraska, Innovative Wireless (formerly Vitel Cellular of the U.S. Virgin Islands), iPCS Wireless / Illinois PCS, IT&E Wireless, i-wireless / Iowa Wireless, Lamar County Cellular, LaMotte Telephone Company, Leaco Wireless, Leap Wireless / Cricket, Long Lines Wireless, Lyrinx Wireless / Iowa RSA No. 2, MBO Wireless / Cross Telco / Sprocket PCS, Metro PCS, Micronesia Telecommunications / FSM Telecommunications Corp, Mid-Rivers Communications, Mid-Tex Cellular, Mobi PCS, Mobile Satellite Ventures, Mohave Wireless / Citizens Mohave, Movistar of Puerto Rico, MTA Wireless / Matanuska Telephone Association, NEP Wireless / The North-Eastern Pennsylvania Telephone Company, Nex-Tech Wireless, Northern PCS , Northwest Missouri Cellular, NTELOS, Ogden Telephone Company, Oklahoma Western Telephone Company, Olin Telephone Company, Omnitel Communications, Onslow Telephone Company, OTZ Telephone Coop., Pace Communications / Kaplan Telephone Co., Pacificom Holdings, Panhandle Telecommunications (PTSI), Peoples Telephone Cooperative. / Peoples Wireless, Petroleum Communications Inc. / PetroCom, Pine Belt Cellular / Pine Belt Wireless, Pine Cellular Phones / Pine Telephone Company, Pinpoint Digital Phone Service, Pioneer / Enid Cellular, Plateau Wireless / ENMR, Pocket Communications, Proxtel Wireless / North Sight Communications, PVT Wireless / Penasco Valley Telecom, Radcliffe Telephone Company, Ramcell dba Cellular Phone of Kentucky, Revol Wireless / Cleveland Unlimited, Rockwell Cooperative Telephone Association, Sagebrush Cellular,

Sharon Telephone Company, Shenandoah Personal Communications Company, Silver Star PCS aka Gold Star Communications, Simmetry Communications, Snake River PCS, South Central Utah Telephone Association / South Central Communications, South Slope Cooperative Telephone Association / South Slope Wireless, Southern LINC Wireless, Sprint Nextel, SRT Wireless / Souris River Telephone, SunCom, SureWest Wireless, Swiftel / Brookings Municipal Utilities, Taylor Telecommunications, Telemetrix / Tracy Corporation, Thumb Cellular / Agri-Valley Communications, T-Mobile USA, Triangle Telephone Company / Montana Communications, U.S. Cellular Corporation, Uintah Basin Electronic Telecommunications / UBET Wireless, UniceL / Rural Cellular Corporation, Unicom (of Alaska), Union Telephone / Union Cellular, United Telephone Association / United Wireless, Van Buren Telephone, Verizon Wireless, Viaero Wireless, Wellman Cooperative Telephone Association, West Central Wireless / CT Cube, WestLink Communications of Kansas, Wilkes Cellular, Winnebago Cooperative Telephone Association, and XIT Wireless / XIT Communications.

These carriers are widely dispersed throughout the country, and according to the FCC, 98% of all Americans live in counties where at least three wireless carriers compete for subscribers and 94% of Americans live in counties with four or more wireless competitors.⁶ In addition, a new company, SpectrumCo., is poised to enter the market having been the high bidder for a national footprint in the AWS auction. Mobile virtual network operators (“MVNOs”) also compete with facilities-based carriers for customers.

⁶ FCC Competition Report at ¶ 41.

Despite these numbers, Skype attempts to show that the wireless market is concentrated by citing the Herfindahl-Hirschman Index (“HHI”) for the industry.⁷ Skype cites the HHI for the industry at 2,706, which is higher than the 1,800 that the U.S. Department of Justice considers to be an indicator that the market is “highly concentrated.”⁸ However, Skype neglects to consider the competitive evolution of the industry.⁹ As the Department of Justice and the FCC have concluded in approving the license transfers that have resulted in the current market structure, the HHI is not a rote rule, but rather the starting point of an inquiry into how a market is functioning.¹⁰

In any one geographic area, the number of providers has increased from two – as of 1992, during the cellular duopoly – to three, four or more providers as

⁷ The HHI is a commonly accepted measure of market concentration, calculated by squaring the market share of each firm competing in the market and then summing the resulting numbers. *See* Horizontal Merger Guidelines, U.S. Dept. of Justice and Fed. Trade Comm’n., at 1.5, *available at* <http://www.usdoj.gov/atr/public/guidelines/hmg.pdf> (last accessed Apr. 7, 2007) (“DOJ Merger Guidelines”).

⁸ Skype Petition at 21; DOJ Merger Guidelines at 1.5.

⁹ DOJ Merger Guidelines at 1.5.

¹⁰ “The Agencies’ joint publication of Merger Challenges Data, Fiscal Years 1999–2003 (issued December 18, 2003), and the Commission’s publication of Horizontal Merger Investigation Data, Fiscal Years 1996–2003 (issued February 2, 2004 and revised August 31, 2004), document that the Agencies have often not challenged mergers involving market shares and concentration that fall outside the zones set forth in Guidelines section 1.51. This does not mean that the zones are not meaningful, but rather that market shares and concentration are but a “starting point” for the analysis, and that many mergers falling outside these three zones nevertheless, upon full consideration of the factual and economic evidence, are found unlikely substantially to lessen competition. Application of the Guidelines as an integrated whole to case-specific facts--not undue emphasis on market share and concentration statistics--determines whether the Agency will challenge a particular merger. As discussed in section 1.521 of the Guidelines, historical market shares may not reflect a firm’s future competitive significance.” “Commentary on the Horizontal Merger Guidelines”, U.S. Dep’t of Justice & Fed. Trade Comm’n, at “Significance of Concentration and Market Share Statistics”, *available at* <http://www.usdoj.gov/atr/public/guidelines/215247.htm> (last accessed Apr. 24, 2007).

of 2006.¹¹ Far from being a more concentrated market than existed in 1992, the wireless industry as of 2006 has more operational wireless licensees in each market.

Although Skype condemns the industry because the average HHI value in the mobile telephony market is 2,706, Skype fails to note that this HHI value is sharply less than that which existed in 1992. The HHIs during the duopoly market can be calculated at either 5,000 (based on the share each operator had of the 50 MHz of spectrum allocated for cellular service in each Cellular Geographic Service Area (“CGSA”)) or in a range from 5,050 to 6,800 (depending on the presumed market share held by each operator in each CGSA – assuming a split of subscriber market shares from 45-55 to 80-20).

In an effort to differentiate themselves in the telecommunications market, wireless carriers have been at the forefront of innovation with new services and market offerings. Following rate deregulation, and the entry of PCS competition in 1996, plan prices fell.¹² Innovation in pricing plans accelerated, with cellular and PCS companies experimenting with the bundling of inexpensive minutes, offering low mobility wireline substitution

¹¹ FCC Competition Report at ¶ 41.

¹² *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services*, Third Report, 13 FCC Rcd 19746, 19766 (1998); *See also* Elizabeth V. Mooney, “Prices down 6 percent as PCS and cellular fight for customers,” *RCR News*, Dec. 1, 1997 at p.23 (noting average decline of six percent, with “some carriers slashing prices by more than a third” as “PCS operators are moving quickly into metropolitan areas, offering very attractive rates and significant long-term promotions to try to capture enough market share to turn a profit, according to Kagan Associates. In response, many cellular carriers are loading more minutes into their rate plans, slashing roaming rates and accelerating digital offerings.”).

plans, and prepaid service.¹³ Other carriers began to follow suit, testing new pricing structures and incentives in an attempt to gain market share. Some PCS plans offered the “first incoming minute free” in 1997.¹⁴ AT&T introduced its Digital One Rate Plan in 1998, followed by the introduction of competing national and regional One Rate-like plans by their rivals.¹⁵ In 1999, competing Family Plans were introduced by a number of wireless companies.¹⁶

Others still began offering plans with periods of unlimited use. In 2000, Leap Wireless, U.S. Cellular, and ALLTEL were offering or experimenting with unlimited

¹³ *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services*, Third Report, 13 FCC Rcd 19746, 19771 (1998).

¹⁴ See “Sprint PCS Launches Advanced Wireless Service in San Diego,” Press Release, Dec. 27, 1996, *available at* <http://www.qualcomm.com/press/releases/1996/press579.html> (last accessed Apr. 17, 2007) (announcing the terms to be offered in Sprint PCS’ markets in 1997, including “The first minute of incoming calls is free in customers’ home service areas.”).

¹⁵ *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services*, Fourth Report, 14 FCC Rcd 10145, 10155-56 (1999); See also, *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services*, Sixth Report, 16 FCC Rcd 13350, 13377-78 (2001); and “Long Distance: Sprint PCS Unveils All-Inclusive Nationwide Service Plans with Prices as Low as a Dime a Minute, Anytime, Anywhere,” *Edge*, Oct. 5, 1998, *available at* http://findarticles.com/p/articles/mi_m0UNZ/is_1998_Oct_5/ai_53058236 (noting nationwide calling plans, and first incoming minute free practice).

¹⁶ *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services*, Fifth Report, 15 FCC Rcd 17660, 17676 (2000) (noting introduction by AT&T in the third quarter of 1999, and SBC’s introduction of its “FamilyTalk” plan); See also, *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services*, Tenth Report, 20 FCC Rcd 15908, 15946 (2005) (noting that “Since 2003, U.S. providers have stepped up efforts to take on more customers through ‘family plan’ packages.”).

flat-rate local calling plans.¹⁷ Free nights and weekends plans were first introduced in 2001 and competing “On-Net” calling plans were introduced in 2002.¹⁸

Unlimited calling plans became extremely popular with customers and unlimited “in-network” calling plans were expanded in 2004 to respond to consumer demand. A number of wireless providers also launched or re-launched prepaid service offerings in response to an ever increasing segment of the market unable or unwilling to sign a post-paid wireless contract.¹⁹

Most recently, “Mobile to Anyone” calling plans were introduced in 2006, allowing customers to choose a fixed number of “friends” to whom the subscriber could make unlimited calls, day or night.²⁰ Pricing innovation also continues in areas other than voice. For example, in April 2007, Verizon Wireless introduced a number of unlimited messaging options.²¹ According to the Bureau of Labor Statistics’ Consumer

¹⁷ See Sixth Report, 16 FCC Rcd at 13382-83.

¹⁸ Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services, Eighth Report, 18 FCC Rcd 14783 (2003) at 14828-29 (noting on-net calling plans’ introduction by Verizon Wireless, AT&T Wireless, and Cingular in 2002, and distinguishing them from Digital One-Rate type plans).

¹⁹ See e.g., Ninth Report, 19 FCC Rcd at 20645-46 (re expansion of in-network or mobile-to-mobile calling in early 2004); see also Tenth Report, 20 FCC Rcd at 15946-47 at paras. 99-100 and n.223 (re: prepaid launches and re-launches).

²⁰ FCC Competition Report at ¶ 91 (noting ALLTEL and SunCom offerings).

²¹ See Kelly Hill, “Verizon Wireless confronts rivals with unlimited messaging service,” RCR News, Apr. 17, 2007, *available at* <http://www.rcrnews.com/apps/pbcs.dll/article?AID=/20070416/FREE/70416003/1002/SUB> (last accessed Apr. 17, 2007).

Price Index for “wireless telephone services,” the cost of wireless service has declined 35.4 percent since December 1997.²²

The utility generated by each dollar of the paid monthly subscription is as important as total price to the value of wireless service. Thanks to lower prices, use of wireless devices has seen a commensurate increase. American consumers average 726 minutes of use (“MOUs”) per month.²³ That’s 88% more than just 5 years ago, and incredibly 376% more than the average European wireless consumer.²⁴

Finally, the Commission has recognized the wireless industry’s long standing record of effective competition. Recently, the Commission’s *Eleventh Annual CMRS Competition Report* found that competitive pressure continues to drive carriers to introduce innovative pricing plans and service offerings yielding significant benefits to consumers.²⁵ Chairman Martin has characterized competition in the wireless marketplace as “fierce,” which “has resulted in billions of dollars in infrastructure investment as well as in significant price decreases for consumers.”²⁶ It is these results,

²² See “Consumer Price Index – Wireless Telephone Services”, U.S. Bureau of Labor Statistics, available at <http://data.bls.gov> (last accessed Apr. 24, 2007) (Data current through March 2007).

²³ Semi-Annual Wireless Industry Indices Report, CTIA – The Wireless Association, at 134, (2006) (“CTIA Indices Report”).

²⁴ Global Wireless Matrix 4Q06, Merrill Lynch, at 2, Mar. 26, 2007.

²⁵ *In re* Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services, *Eleventh Report*, WT Docket No. 06-17, FCC 06-142, para. 2-5 (Sept. 29, 2006) (“*Eleventh Report*”).

²⁶ FCC Chairman Kevin J. Martin, Regulation, Competition, Telecommunications and Content, Remarks before the Portuguese Association for Communications Advancement (Nov. 16, 2006).

Chairman Martin remarked, that “demonstrate how a competitive marketplace—rather than economic regulation—provides the greatest benefits to the American consumer.”²⁷

With a light regulatory touch, Commissioner Tate encouraged the wireless industry to continue to innovate and clarified that the “FCC should be concerned with ensuring fair competition and allowing the market to work effectively.”²⁸ Commissioner McDowell also touted the flourishing competition among wireless providers as he recounted the FCC’s record of accomplishments before the House Telecom Subcommittee:

“Wireless growth is rising rapidly due to robust competition and technological innovation...advanced technologies allow customers to use new multimedia phones to watch TV, download songs, receive information and access content, such as sports, news and weather, at broadband speeds...wireless subscriber growth has grown exponentially, and competition among numerous providers has flourished.”²⁹

Commissioner Adelstein also expressed his support for the competitive policies that have shaped the wireless industry and continue to allow it to thrive:

“Competition has been the driver of CMRS industry growth over the past decade. To maintain that growth, we are best served by ensuring that competition is alive and vibrant. The Commission

²⁷ See Statement of Chairman Kevin J. Martin, *Eleventh Report* at 114.

²⁸ FCC Commissioner Deborah Taylor Tate, Remarks to the Rural Cellular Association (May 9, 2006).

²⁹ FCC Commissioner Robert M. McDowell, Before the Subcommittee on Telecommunications and the Internet Committee on Energy and Commerce, United States House of Representatives (Mar. 14, 2007).

must always be looking for opportunities to promote the deployment of new, competitive CMRS services – whether through spectrum management or other types of policymaking. We are starting to see increased market penetration by newer CMRS carriers that are focused on traditionally underserved consumer markets like lower-income Americans. This is a very positive trend, and one that we should support through our policy making.”³⁰

These statements provide a true illustration of a competitive market – certainly a more accurate picture than the single, mischaracterized HHI measurement provided by Skype.

B. Wireless Carriers Also Compete on Services and Quality of Service

In addition to price, carriers compete on quality of service and customer satisfaction and, overall, consumers are increasingly happy with their wireless providers. According to J.D. Power and Associates 2006 Wireless Call Quality Survey, the overall rate of customers experiencing a wireless call quality problem declined for a second year in a row, and reached its lowest level since the study began in 2003.³¹ Ironically, the high level of customer satisfaction may be a result of the network management principles that Skype complains of.³² Complaints to the FCC about wireless carriers have been

³⁰ FCC Commissioner Jonathan Adelstein, Pre-Hearing Questions from the Committee on Energy and Commerce, United States House of Representatives (Feb. 7, 2007).

³¹ FCC Competition Report at 5.

³² Robert W. Hahn, Robert E. Litan & Hal J. Singer, *The Economics of “Wireless Net Neutrality”*, April 2007, *infra* app. E at 28 (“Wireless Net Neutrality”).

declining as well. According to the Commission's own data, the total number of wireless complaints per quarter fell 40% from the third quarter of 2005 to the third quarter of 2006. During that same time period, the number of complaints per million subscribers fell 47% from 34 complaints per million to 18 complaints per million subscribers – less than two-thousandths of one percent of subscribers.³³

One catalyst for a number of innovative new services is the rise of the Mobile Virtual Network Operators (“MVNOs”). MVNOs are non-facilities based wireless carriers who lease capacity from existing facilities-based networks.³⁴ Because of their leasing arrangements, MVNOs have been able to tailor their service offerings to serve more niche markets than large national carriers, who appeal to the broadest number of subscribers. Some examples are Disney Mobile, which caters to families with young children, Jitterbug,³⁵ which caters to older Americans, Amp'd Mobile,³⁶ offering unique music and video content targeted at the youth market, and Movida Cellular,³⁷ targeting Hispanic consumers. The MVNO market has experienced rapid growth since it began in 2003, nearly tripling its total subscribership from 4.7 million to 13.4 million subscribers.³⁸

³³ “Quarterly Inquiries and Complaints Reports”, FCC, *available at* <http://www.fcc.gov/cgb/quarter/welcome.html> (last accessed Apr. 26, 2007).

³⁴ FCC Competition Report at ¶ 27.

³⁵ *See* <http://www.jitterbug.com>.

³⁶ *See* <http://www.ampd.com>.

³⁷ *See* http://www.movidacelular.com/movida_english/movida.html.

³⁸ FCC Competition Report at ¶ 27.

C. Consumers Also Benefit From Robust Competition Between Handset Providers

The Skype Petition characterizes the handset market as one where “manufacturers are forced to design equipment based on what carriers will allow, not necessarily what consumers want and the state-of-the-art will permit.”³⁹ “State-of-the-art” technology certainly may allow handset features that consumers do not currently receive, but that hardly matters because consumers are driving the handset market. Given our market driven economy and the number of competitors,⁴⁰ consumers ultimately drive carrier handset decisions. Some consumers want handsets that offer the most number of new and innovative features that the technology will bear. Others may prefer to receive a handset with a minimal set of features.⁴¹ Ultimately, it should be up to consumers to determine what features they want and carriers should have the freedom to give them what they ask for.⁴² Indeed, with approximately 700 mobile wireless handsets on the market in the United States, mobile wireless carriers clearly are making every effort to ensure that consumers receive desired features.

As with the rest of the points it raises, Skype offers no actual proof that consumers are being foreclosed from obtaining desired handset features. Skype offers the Nokia E62/E61 as an example of a carrier – Cingular Wireless (now AT&T Mobility)

³⁹ Skype Petition at 13.

⁴⁰ Including MVNOs who compete by offering innovative, exclusive handset tailored to their customers needs. *See e.g.*, Jitterbug, <http://www.jitterbug.com>; Disney Mobile, <http://disneymobile.go.com>; Helio, <http://www.helio.com>; and Amp’d, <http://www.ampd.com>.

⁴¹ *See* Jitterbug, <http://www.jitterbug.com>; Firefly, <http://www.fireflymobile.com>.

⁴² Wireless Net Neutrality at 34.

– exercising control over a handset manufacturer to prevent the inclusion of a feature – in this case, Wi-Fi access.⁴³ Skype claims that this example is illustrative of the lengths to which wireless carriers in the United States will go to control the handset. While Skype conveniently chose a handset that does not offer Wi-Fi, their argument proves incomplete when the wide variety of Wi-Fi and non-Wi-Fi enabled handsets available in both carriers’ stores and independent retailers are examined.

A host of carriers – including AT&T Mobility – offer other phones with integrated Wi-Fi access.⁴⁴ Moreover, at least one national carrier is currently testing hybrid CMRS/Wi-Fi switching technology in select markets, allowing for the seamless transition of calls from a mobile wireless network to Wi-Fi networks when available.⁴⁵

⁴³ Skype Petition at 14-15 (stating that Cingular Wireless contracted to be the exclusive United States vendor for a version of a Nokia smartphone that lacked the Wi-Fi connectivity of its European counterpart).

⁴⁴ See e.g., Samsung SCH-i730, VERIZONWIRELESS.COM, *available at* <http://www.verizonwireless.com/b2c/store/controller?item=phoneFirst&action=viewPhoneDetail&selectedPhoneId=1780> (last accessed Mar. 27, 2007); T-Mobile Dash, T-MOBILE.COM, *available at* <http://www.t-mobile.com/shop/phones/Detail.aspx?device=f164419f-eee9-4cf6-a1bd-070dbe4b5023> (last accessed Mar. 27, 2007); Cingular 8125 Pocket PC, CINGULAR.COM, *available at* http://www.cingular.com/cell-phone-service/cell-phone-details/?q_list=true&q_phoneName=Cingular+8125+Pocket+PC&q_sku=sku1000007-1 (last accessed Mar. 27, 2007); Sprint PCS Vision Smart Device PPC-6700, SPRINT.COM, *available at* http://www1.sprintpcs.com/explore/PhonesAccessories/PhoneDetails.jsp?navLocator=%7Cshop%7CphonesAccessories%7CAllPhones%7C&selectSkuId=sprintppc6700&FOLDER%3C%3Efolder_id=1476015&CURRENT_USER%3C%3EATR_SCID=ECOMM&CURRENT_USER%3C%3EATR_PCode=None&CURRENT_USER%3C%3EATR_cartState=group (last accessed Mar. 27, 2007); UTStarcom PPC-6700, ALLTEL.COM, *available at* <http://www.alltel.com/phones/audiovox/6700.html> (last accessed Mar. 27, 2007); see also *infra* app. A.

⁴⁵ See “T-Mobile @ Home”, T-Mobile, *available at* <http://www.theonlyphoneyouneed.com> (last accessed Apr. 7, 2007) (marketing T-Mobile’s integrated service combining HotSpot access, wireless voice and data service, and seamless call switching between their CMRS network and CPE routers).

So although one particular handset may have had a capability disabled, many other devices with that same capability are available on the market from the major wireless carriers, including the same carriers highlighted by Skype.

Moreover, three of the four national carriers offer “air cards” – that add wireless Internet functionality to laptop computers – for wireless broadband Internet access, and the fourth offers a package of Wi-Fi hotspot access to accommodate subscribers with Wi-Fi enabled laptops and PDAs.⁴⁶ Importantly, none of this discussion includes the numerous offerings available from Tier-II and Tier-III wireless carriers. Additionally, none of these handset offerings were mentioned when Skype filed complaining of the lack of Wi-Fi handsets.

III. SKYPE’S DEMAND FOR OPEN HANDSET ACCESS FOR APPLICATIONS IS NEITHER SUPPORTED BY MARKET CONDITIONS NOR REQUIRES REGULATORY ACTION

Skype bemoans the inability of developers to bring wireless applications to market due to carrier practices. However, Skype’s characterization of the market for applications is inaccurate, particularly given the availability of Skype Mobile software for handsets on all four national carriers.⁴⁷ Developers are free to choose from a variety of programming environments to code potential applications and have the ability to either bring these applications to carriers for approval and incorporation in their portal, to

⁴⁶ Wireless Net Neutrality at 36.

⁴⁷ See “Skype 2.1 for Pocket PC,” SKYPE.COM, *available at* <http://www.skype.com/download/skype/mobile/download.html> (last accessed Mar. 27, 2007); “Skype 2.2 Beta for Windows Mobile,” SKYPE.COM, *available at* http://www.skype.com/download/skype/mobile/download_beta.html (last accessed Mar. 27, 2007) (Skype client software is installed on carrier handsets through Microsoft’s ActiveSync software, which is provided with all Windows Mobile handsets. The process of installing Skype for Mobile is largely automated and can be accomplished on Windows Mobile and PocketPC handsets from all major carriers in a matter of minutes.)

market them directly to handset manufacturers, as the Google example illustrates, or to make them available on the Internet for download to handsets, as the Skype example illustrates.

Contrary to Skype's contentions, the market for wireless handset applications is vibrant, competitive, and open to any developer willing to program within a handset's limitations. Regulatory action in such an environment is neither warranted, nor proper.

A. Wireless Consumers Are Not Foreclosed From Running Software Applications of Their Choosing

Although wireless carriers oversee the applications that come pre-loaded on the handsets they sell, there are existing platforms and methods for users to run applications that are not provided through their carriers' application process. Most notable is the increasing prevalence of Windows Mobile as a platform for "Pocket PCs" and "Smartphones." Skype software runs on these handsets utilizing Windows Mobile.

Windows Mobile, an operating system for mobile handsets, adapts the popular Microsoft Windows operating system and Microsoft Office suite of productivity applications to the handset market.⁴⁸ Developers are free to write programs to run on Windows Mobile handsets using Microsoft's Windows Mobile Development Kit, which allows programmers to use the existing Windows Mobile Application Programming Interface ("API") to develop applications for this mobile operating system.⁴⁹ Cutting-

⁴⁸ See "What is Windows Mobile?" Microsoft Corporation, *available at* <http://www.microsoft.com/windowsmobile/about/default.mspx> (last accessed Mar. 27, 2007).

⁴⁹ See "Windows Mobile for Developers," Microsoft Developers Network, *available at* <http://www.microsoft.com/windowsmobile/developers/default.mspx> (last accessed Mar. 27, 2007). See also "Visual Studio: Learn More," *available at* <http://msdn2.microsoft.com/en-us/vstudio/aa973782.aspx> (containing a partial list of the

edge mobile applications can be, and have been, written for use on this platform and are allowing mobile users to use their existing wireless data service to stay better connected. In fact, Skype's own developers have already taken advantage of the open programming environment afforded under the Windows Mobile family of operating systems, developing Skype client software for use on both the Pocket PC and Smartphone variations of the operating system.⁵⁰

Although users are free to install software on their handsets, some carriers set limitations on what users can do with their handsets.⁵¹ While some carriers have opted to define a set of services for use on their wireless data network, others have maintained a liberal policy allowing customers some flexibility to use the network moderately as they see fit. For example, Verizon Wireless and AT&T choose to explicitly define the Internet services for which they are providing access to their network.⁵² By way of contrast, Sprint's terms and conditions are somewhat less restrictive and T-Mobile's terms and conditions of use contain no such restrictions.⁵³ Determining the relative merits of the

available programming languages available under Visual Studio.) (last accessed Mar. 27, 2007).

⁵⁰ See "Skype 2.1 for Pocket PC," *supra*, note 44.

⁵¹ Skype Petition at 18-19.

⁵² See <http://www.verizonwireless.com/b2c/store/controller?item=planFirst&action=viewPlanList&sortOption=priceSort&typeId=5&subTypeId=13&catId=409> (last accessed Mar. 27, 2007); http://www.cingular.com/b2b/downloads/terms_wirelessDataService.pdf (last accessed Feb. 12, 2007).

⁵³ See <http://www.sprintpcs.com/common/popup/popLegalTermsPrivacy.html>; <http://www.t-mobile.com> (Terms and Conditions, Term Number 7 (Use of Service)).

different models of wireless broadband should be judged by consumers, not by regulators ill-suited to choosing winners and losers in a competitive market.

In short, Skype's contention that consumers have been harmed by the efforts of wireless carriers to ensure quality of service is disputed by existing market conditions that allow consumers the freedom to choose the set of wireless broadband features they value most.

B. Skype Users Are Not Prevented From Communicating With Wireless Users

Despite Skype's claims, Skype users are not being denied connection with CMRS users.⁵⁴ Skype users can connect with CMRS customers and vice versa. Skype cites no examples of "harm" to consumers in their Petition other than the fact that their software is not pre-loaded onto handsets, distributed by carriers through existing distribution channels, or approved to run on some handset operating systems. This argument is allegedly offered to enable Skype's customers to have access to mobile wireless networks. However, there is nothing foreclosing Skype customers from doing so without regulatory intervention.

First, Skype's own premium services give its users the ability to contact users of commercial wireless networks. Skype users, unlike some other varieties of voice over IP service, have the ability to interconnect with the public switched telephone network ("PSTN") from their existing Skype service. Subscribers to these services are able to both place calls to the PSTN from their Skype client, and to receive calls from the PSTN

⁵⁴ Skype Petition at 19-20.

via a traditional phone number.⁵⁵ The only thing stopping users of the Skype service from being connected with their friends who are using CMRS is their willingness to pay Skype for optional services.

Second, CMRS users who would like to be able to interconnect with the Skype world are similarly not being stopped by the practices of the wireless industry. The SkypeIn service, a premium Skype service, allows Skype users to interconnect with the PSTN for purposes of receiving calls. Subscribers to this service, available in a number of domestic area codes and foreign countries, are given a traditional phone number which any other interconnected service can then connect to as though the Skype user were using traditional telephony.⁵⁶

C. Skype Employs the Very Practices It Argues Against

In the height of hypocrisy, Skype complains about carriers' use of application locks and approval of handset applications as anti-consumer to protect network security, yet Skype employs similar network security practices on its network.

Although Skype's network is software based, and uses hardware of its users to form the backbone of its service, the way in which the elements of the Skype network operates is not unlike facilities-based wireless networks. Skype claims that CMRS carriers use of application management is stifling to competition and anti-consumer.

⁵⁵ See "SkypeIn" SKYPE.COM, *available at* <http://www.skype.com/products/skypein/> (last accessed Apr. 19, 2007); "SkypeOut" SKYPE.COM, *available at* <http://www.skype.com/products/skypeout> (last accessed Apr. 19, 2007).

⁵⁶ Skype offers SkypeIn numbers in "most area codes and many foreign countries." See "SkypeIn" SKYPE.COM, *available at* <http://www.skype.com/products/skypein/> (last accessed Apr. 19, 2007).

However, Skype also uses a closed-source network for application development and for the same reason carriers have employed such a policy.

Niklas Zennström, Founder and CEO of Skype, stated at the VON Conference last March:

“In terms of open-sourcing, what we’re doing is that we have [been] gradually opening more and more APIs to the Skype software. We are, from time to time we [are] having more discussions how more we can open up, it’s always a trade-off between how well we can protect not so much the IP rights but to protect the integrity of the network because if we would open-source, for example, Skype you would see a lot of bots, a lot of spamming, spoofing and all those kinds of nasty things that you have on e-mail that you don’t have on Skype because we have a secure network.”⁵⁷

These same concerns are the rationale for maintaining the policies that carriers have for managing the applications that run on their networks and can be run on the handsets they subsidize.

IV. OPEN ACCESS HARDWARE STANDARDS FOR WIRELESS NETWORKS WILL STIFLE INNOVATION AND HARM CONSUMER WELFARE

The wireless industry is constantly innovating at the core of the network and in handsets at network edges. Skype claims that allowing consumers to attach any device to wireless networks will bring more innovation to the handset market and therefore will

⁵⁷ Statement of Niklas Zinnström, Founder and CEO, Skype Communications S.A.R.L., given at the VON Conference, March 2007, *available at* <http://www.tvworldwide.com/events/videoonthenet/070319/default.cfm?id=8038&type=wmhigh> (last accessed Apr. 19, 2007).

benefit consumers.⁵⁸ Skype's short-sighted request will result in degraded service quality for consumers, and in effect, leaves consumers with the burden of ensuring the quality of their mobile service and carriers without the ability to manage and improve service quality.

Skype cites the *Carterfone* principles as a success story for consumers, which led to such technological advances as the "Hayes-compatible modem" and the traditional phones users could attach to the RJ-11 jack in their homes.⁵⁹ The *Carterfone* decision did facilitate many new phones from a number of manufacturers. However, while the *Carterfone* decision may have brought new wireline devices to the market, these developments pale in comparison to the innovation that has occurred and continues to occur in the competitive wireless industry – without any regulatory intervention.

Because of their ability to continually change elements of their networks, including the handsets, wireless carriers have been able to revolutionize the way Americans think about being connected to the telecommunications infrastructure. Even while ignoring mobility – arguably the most important innovation in telecommunications – the wireless industry has revolutionized its service offerings, its handset capabilities, and the way wireless networks interact with handsets. Air interface standards alone have seen 12 iterations between 1988 and today,⁶⁰ with fourth generation end-to-end IP networks currently in the standardization process.⁶¹

⁵⁸ Skype Petition at 13-15.

⁵⁹ Skype Petition at 9-11.

⁶⁰ See Jackson, Charles, "Handsets are Part of the Network", *infra* app. C at 9 ("Jackson Paper").

⁶¹ See generally 3GPP, <http://www.3gpp.org>.

Despite Skype's claims that developers must get carrier permission to innovate and that carrier practices restrict the availability of innovative new services, carriers are enabling innovations within the network and offering handsets that require carrier specific network compatibility. Innovations by Microsoft and Research in Motion have enabled wireless users to have real-time access to personal information and the ability to sync with their personal calendars and email accounts on their handheld devices.⁶² Neither of these innovations, now widely used by both business and personal mobile users, would be possible without both hardware and software based solutions at the network edge and within the network.⁶³ Importantly, these innovations are available from multiple wireless carriers due to the demands of the competitive market.

This ability to continue improving and adding intelligence to the network itself, in addition to the handset, has allowed the wireless industry to continue to push the envelope of innovation and to better serve customers. Examples of network intelligence enabling new features and optimizing others are abundant in the wireless space, including Internet access and assisted global positioning systems ("AGPS").

AGPS chips utilize wireless network intelligence to provide faster, more accurate locating capabilities than traditional GPS alone. AGPS "creates a synergistic relationship between wireless networks and GPS satellites to create a precise positioning service that

⁶² See Microsoft Outlook Mobile, MICROSOFT.COM, *available at* <http://www.microsoft.com/windowsmobile/microsoftprograms/outlookmobile.msp> (last accessed Apr. 7, 2007); Discover BlackBerry, DISCOVERBLACKBERRY.COM, *available at* <http://www.discoverblackberry.com/discover> (last accessed Apr. 7, 2007).

⁶³ BlackBerry devices rely on both handsets capable of using the BlackBerry service and a backend BlackBerry server to handle the exchange of information between the customers' calendar and email server and the wireless network. Windows Outlook Mobile relies on customers with handsets running Windows Mobile 5 or 6, and the use of a Microsoft Exchange Server for email and calendar management.

is available even in traditionally ‘invisible’ areas.”⁶⁴ Without intelligence both in the network and at the edge of the network, this potentially life-saving technology would not be possible.

Intelligent networks have also enabled better access to telecommunications services by Americans with hearing disabilities. Vocoder technology used in both handsets and base stations enable telecommunications-devices-for-the-deaf (“TDD”) users to benefit from the mobility offered by the wireless industry.⁶⁵

Skype derides carriers for managing the handsets that access their networks, and in some cases, the applications that run on the handsets, aspiring instead to a market model in which carriers have no oversight of the equipment and applications that take advantage of their networks.⁶⁶ Rather than allow consumers to pick and choose the features and services they find most appealing on the open market, Skype seeks to replace carriers’ and consumers’ judgment with regulatory mandate. A prime example of this type of concern in the wireless space is the prevalence of Bluetooth and the phenomenon of “Blue Snarfing.”⁶⁷

⁶⁴ See e.g., gpsOne, QUALCOMM, *available at* <http://www.cdmatech.com/products/gpsone.jsp> (last accessed Apr. 13, 2007) (Describing gpsOne by Qualcomm, an Assisted GPS solution that “creates a synergistic relationship between wireless networks and Global Positioning System (“GPS”) satellites to create a precise positioning service that is available even in traditionally ‘invisible’ areas.”); *see also* Wireless Net Neutrality at 15.

⁶⁵ See e.g., “13K Vocoder TTY/TDD Extension”, 3rd Generation Partnership Project 2, *available at* http://www.3gpp2.org/public_html/specs/C.S0020-0-2.pdf (last accessed Apr. 26, 2007).

⁶⁶ A view that is wholly inconsistent with the Commission’s E-911 and HAC rules, *See* 47 C.F.R. § 20.18-.19; *See also* Jackson Paper at § 6.2.

⁶⁷ See Munir Kotadia, “Bluetooth phones at risk from ‘snarfing’”, ZDNET.CO.UK, Feb. 9, 2004, *available at*

Bluetooth, a short range wireless standard, is incorporated into many wireless devices, enabling the use of Bluetooth enabled earpieces among others. Improperly configured phones and inexperienced users could be exploited through the use of Bluetooth to give out all of the personal data contained within the handset. Different American carriers have taken different approaches to addressing this problem. Most have taken the step of disabling Bluetooth by default and forcing users to affirmatively enable the hardware through the operating system software. However, Verizon Wireless went a step further and removed one of the Bluetooth profiles capable of betraying the users' data from the phones, thus also removing some of the features of Bluetooth.⁶⁸ In either case, a customer seeking Bluetooth capabilities has competitive options, which further illustrates that the competitive marketplace is working.

Another area in which Skype claims wireless carriers are stifling innovation is wireless Internet access.⁶⁹ Skype criticizes the wireless industry for creating a "walled garden". The "walled garden" approach, which limits subscribers to wireless Internet access on handsets to pages either designed by the carrier or to those that had been pre-authorized and optimized for delivery to wireless handsets, is not a new practice, nor is it unique to wireless. Prodigy and America Online, pioneers of dial-up access to the Internet and information services generally, both began with a walled garden approach to

<http://news.zdnet.co.uk/communications/0,1000000085,39145881,00.htm> (last accessed Apr. 19, 2007).

⁶⁸ See *Opperman v. Cellco Partnership*, Los Angeles Superior Court, Case No. BC326764, Notice of Class Action Settlement and Approval Hearing, Jan. 6, 2005, *available at* <http://www.verizonwireless.com/pdfs/v710settlement/Second%20Notice%2001-4-06%20FINAL.pdf>.

⁶⁹ Skype Petition at 18.

the Internet, tailoring content to be more easily used by the customers. However, both companies abandoned their walled garden policies when faced with competition from other access providers that provided customers more access to the Internet and technologies were developed allowing easier access to information.

The same trend has occurred in the wireless space, where wireless carriers have largely abandoned a “walled garden” approach as the exclusive means of obtaining Internet access, due in part to the ability of carriers to use intelligent networks to optimize data streaming to handsets from the Internet. Network elements dynamically convert Internet headers and content to better accommodate handset capabilities and spectrum availability. Although some wireless carriers continue to offer secured access to specific content, wireless Internet access is broadly available on numerous devices, further illustrating the responsiveness of the wireless carriers to meeting consumer demands.

Despite the incentive to respond to consumers, Skype cites Professor Tim Wu’s paper in its Petition as evidence of its assertion that wireless consumers would be better off with a regulated open access standard. Professor Wu and Skype cite a list of features they claim the wireless market has denied consumers, to their detriment.⁷⁰ Even if Professor Wu and Skype’s assertions are taken at face value and wireless carriers did actively convince handset manufacturers to leave those features out of handsets, the proffered list should serve instead as proof that the wireless market *is* dynamic and

⁷⁰ Skype Petition at note 22; Wu, Tim, *Wireless Net Neutrality: Cellular Carterfone and Consumer Choice in Mobile Broadband*, New America Foundation, available at http://www.newamerica.net/files/WorkingPaper17_WirelessNetNeutrality_Wu.pdf (last accessed Apr. 12, 2007) (“Wu Paper”).

responds to the will of the consumers, as most of those features are now prevalent because consumers demanded them.⁷¹

V. APPLICATION OF THE CARTERFONE PRINCIPLES TO WIRELESS IGNORES BOTH MARKETPLACE AND TECHNOLOGICAL REALITIES

Skype's Petition asks the Commission to consider the application of the principles espoused in the *Carterfone* decision to the wireless industry. In *Carterfone*, the Commission concluded that AT&T – then a vertically integrated rate-regulated monopoly – should not be permitted to stifle competition in the market for CPE by prohibiting the attachment of non-Bell devices to the wireline telephone network.⁷² Unlike the Bell System at the time of the *Carterfone* decision, the wireless industry is not dominated by a rate-regulated monopoly provider, wireless carriers do not manufacture the handsets they sell, and the market for mobile wireless handsets is both competitive and innovative without regulatory intervention, and wireless is a shared resource which could be degraded as a result of even one consumer's harmful use. Skype's request to apply *Carterfone* regulation to the wireless industry is completely misplaced.

⁷¹ Professor Wu cites call timers, photo sharing, web access, Bluetooth, and Wi-Fi as features that wireless carriers deny their consumers. Wu Paper at 9-11. Call timers are now on virtually every phone currently offered at market; photo sharing can be accomplished through the MMS service on most phones and by connecting to a PC by USB on Windows Mobile equipped devices; web access is a prime example of consumer demand shifting carrier offerings (*See* Section IIIA, *supra*); Bluetooth, in differing forms is offered on phones from all major carriers (*See* Section VIIA, *supra*); and Wi-Fi is available on at least one phone offered by each nationwide carrier (*See* app. A, *infra*). *See also* Wireless Net Neutrality at 34-41.

⁷² *See In re Use of the Carterfone Device and Message Toll Telephone Service*, Decision, 13 FCC 2d 420 (1968).

A. The “*Carterfone* Principles” Do Not Apply to Today’s Regulatory Structure

Skype’s Petition cannot be supported through an analogy to *Carterfone*. As with all jurisprudence, *Carterfone* arose in the context of particular circumstances that constituted both the requirement for and the basis of the decision. Those circumstances were fundamentally unlike those that prevail in the contemporary wireless industry. The regulatory structure and the competitive dynamics of the wireless market bear no resemblance to the wireline market at the time of *Carterfone* – a decision, seminal as it was, that properly is consigned to history.

Thomas Carter’s issue with AT&T was, at its core, an antitrust complaint. Carter alleged that AT&T was extending its monopoly over telephone communications into the market for CPE.⁷³ The *Carterfone* was a device that enabled a wireline telephone call to be transferred by induction to or from a two-way radio⁷⁴ such that, for example, an offshore worker on an oil platform might be remotely connected to AT&T’s system. AT&T, through a subsidiary, manufactured a similar product.⁷⁵ AT&T allegedly required its buyers and lessees “not to deal with the Carterphone [sic] unit.”⁷⁶ It did so in part through enforcement of Tariff FCC No. 132, which prohibited the attachment of devices like the *Carterfone* to its network, potentially on pain of termination of service.⁷⁷

⁷³ Carter v. AT&T, 250 F. Supp. 188, 189 (N.D. Tex. 1966) (“Carter I”).

⁷⁴ *Id.*

⁷⁵ *Id.* at 192.

⁷⁶ Carter v. AT&T, 365 F.2d 486, 490 (5th Cir. 1966), *cert. denied*, 395 U.S. 1008 (1967) (“Carter II”).

⁷⁷ *Id.* at 491 & n. 5.

Carter’s initial complaint, before the courts directed the matter to the FCC, was purely an antitrust action, without regard to the validity of the tariff *per se*.⁷⁸ Carter made a point of not attacking the tariff directly; rather, he used the tariff as evidence of AT&T’s purpose to exclude competition.⁷⁹ The Fifth Circuit affirmed the district court’s decision that the validity or invalidity of the tariff — including an antitrust analysis — was both critical to resolution of the claim,⁸⁰ and, in the first instance, under the primary jurisdiction of the FCC.⁸¹

The FCC subsequently invalidated the tariff, concluding that the Carterfone “had no material adverse effect upon use of the telephone system.”⁸² The FCC also found the tariff was “unduly discriminatory” in that it prohibited use of the Carterfone while allowing use of the telephone companies’ own “interconnecting devices,” but this was confined to the Act’s definition of “discriminatory” rather than in any antitrust sense.⁸³

There are numerous, critical differences between the competitive conditions in the wireless and wireline markets as well as in the business of AT&T at the time of *Carterfone* and that of the wireless carriers today. These differences make any theory of anticompetitive conduct or consumer harm in the wireless market untenable under accepted economic principles.

⁷⁸ Carter II, at 490-91.

⁷⁹ *Id.* at 491.

⁸⁰ Carter II at 498

⁸¹ *Id.* at 499-500.

⁸² Carterfone at 423.

⁸³ *Id.* at 424.

B. The Wireless Market Is Not Dominated by a Monopoly Provider

In 1968, the provision of telecommunications transmission service was a thoroughgoing monopoly. AT&T was a rate-regulated monopolist in the telephone communications market and it was vertically integrated, selling CPE in competition with other downstream firms. If consumers didn't like the price or performance of the terminal equipment that the old Bell System provided, they had no recourse. In that sense, consumers were captive. *Carterfone*, and nearly ten additional years of industry-government skirmishing to implement *Carterfone*, changed that to the benefit of consumers.

In contrast, today's wireless industry consists of four national carriers, three additional carriers with nationwide footprints after the AWS auction, additional regional carriers, some quite significant in size, and the prospect of additional entry by other entities that have begun making large investments in spectrum. With the largest telecommunications carrier possessing only a 27% market share,⁸⁴ it is clear that no telecommunications carrier possesses market power in the antitrust sense.⁸⁵

Obviously, the situation of today's wireless consumers in terms of choice is different and dramatically better. In a telecommunications market without a monopolist, no firm has either the incentive or the market power to impose anticompetitive effects on

⁸⁴ FCC Competition Report at Appendix A, Tables 1 & 4; *See also* Nigro, Bernard A. & Trahar, Michael, "An Antitrust Perspective in Response to Skype's Petition", App. D at 3-5 ("Antitrust Perspective").

⁸⁵ *See Image Technical Servs. v. Eastman Kodak Co.*, 125 F.3d 1195, 1206 (9th Cir. 1997) ("Courts generally require a 65% market share to establish a *prima facie* case of market power."); While market power also depends on factors other than market share alone, the market share threshold for market power generally exceeds 70% and is almost never less than 50%. ABA Section of Antitrust Law, *Antitrust Law Developments* (6th ed. 2007) at 231-32 & ns. 35, 38 (compiling cases); *see also* Wireless Net Neutrality at 18.

the downstream CPE market.⁸⁶ The wireless market, as discussed above is a highly competitive industry.⁸⁷ Carriers compete at all levels for customers on the basis of price, service offerings, and network reliability, and consumers can, and do, change providers based upon individual needs. Indeed, the wireless industry is robustly competitive, as the Commission has repeatedly noted, and no provider has market power in the provision of wireless service.⁸⁸

Skype's request for regulation is particularly untimely given the recent completion of the Advanced Wireless Services ("AWS") auction, and other upcoming auction of spectrum in the 700 MHz bands.⁸⁹ In an industry already marked by intense competition, the licenses being granted by the Commission as a result of the AWS auction will not only aid several of the nation-wide carriers to continue to roll out their third-generation data network, but will allow three new entrants to the national market to begin providing broadband service.⁹⁰

⁸⁶ Wireless Net Neutrality at 30 ("All theories of vertical foreclosure begin with the premise that the firm has monopoly power in the 'primary' or 'tying' market.") (citation omitted); *accord* George S. Ford, Thomas M. Koutsy & Lawrence J. Spiwak, "Wireless Net Neutrality: From Carterfone to Cable Boxes", Phoenix Center for Advanced Legal & Economic Public Policy Studies, April 2007.

⁸⁷ See Section II, *supra*.

⁸⁸ See generally FCC Competition Report.

⁸⁹ See Auction No. 66: Advanced Wireless Services, Fed. Communications Comm'n., *available at* http://wireless.fcc.gov/auctions/default.htm?job=auction_summary&id=66 (last access Apr. 17, 2007); See generally, *In re Service Rules for the 698-746, 747-762 and 777-792 MHz Bands*, Notice of Proposed Rulemaking, WT Docket No. 06-150 (rel. Aug. 10, 2006).

⁹⁰ T-Mobile USA, Leap Wireless, SouthernLINC Wireless, and SpectrumCo. all won nationwide licenses in the AWS auction. See generally, Auction No. 66: Advanced Wireless Services, Fed. Communications Comm'n., *available at* http://wireless.fcc.gov/auctions/default.htm?job=auction_summary&id=66 (last access Apr. 17, 2007).

Given that the wireless market continues not only to remain competitive, but also is becoming more competitive with new entrants, Skype's contention that the wireless market is in need of adjustment is incorrect.

C. Wireless Carriers Do Not Manufacture Handsets

Unlike with AT&T in 1968, wireless carriers are not engaged in the manufacturing of wireless handsets. The economic analysis underpinning the decision in *Carterfone* is premised on promoting a competitive industry by preventing a monopolist from exercising power in an adjacent market. In *Carterfone*, AT&T, a government regulated monopoly, exercised its power in the service market to force consumers to lease CPE from Western Electric.⁹¹ Customers looking for an alternative were forced to pay a tariff to use “equipment known to the Bell Telephone-Western Electric complex as ‘foreign attachments.’”⁹² *Carterfone* was a critical step in the Commission's efforts to increase competition in the CPE market to remedy an underlying market failure. The market for wireless handsets, however, suffers from no such market failure because wireless carriers are not in the handset business.

The competitive concerns that led to the *Carterfone* decision discussed above – that AT&T, through its manufacturing arm, was charging excessive rates for CPE, and was

⁹¹ *Carterfone* at 420-23.

⁹² *In re Applications of Microwave Communications, Inc. (MCI)*, Decision, 18 FCC 2d 953, 978 (1969) (statement of Johnson, Comm'r). The Commission continued its efforts to promote competition in the CPE market by rejecting the Primary Instrument Concept (PIC), which would have required each subscriber with a single basic telephone line to lease one telephone set from the incumbent telephone carrier. *In re Implications of the Telephone Industry's Primary Instrument Concept*, Report and Order, 68 FCC 2d 1157, 1158 ¶ 4 (1978). According to the Commission, the PIC was “fundamentally inconsistent with the principles” articulated in *Carterfone* & Part 68 and would have undermined the “public benefits from diversity in the supply of terminal equipment” *Id.* at 1176 ¶ 48.

stifling competition in the CPE market⁹³ – are not present in the wireless market. Further, even if a network carrier had monopoly power in the telecommunications market, “without having an affiliated supplier in the secondary market, the ‘monopolist’ lacks the incentive to steer [a] customer towards one vendor over another.”⁹⁴

Furthermore, in contrast to the Bell System at the time of *Carterfone*, wireless consumers aren’t being forced to pay more for devices. In fact, due to the nature of handset offerings by carriers, they are paying significantly less than cost. Handset prices are heavily subsidized, and customers would pay considerably more for their wireless handsets if carriers were prohibited from bundling such devices with wireless service. Robust competition for wireless handsets, which was not the case in the wireline CPE market at the time of the *Carterfone* decision, ensures consumer benefit.⁹⁵

D. The Market for Handsets Is Both Competitive and Innovative Without Regulatory Intervention

The Commission’s policy objective underlying *Carterfone* was to stimulate innovation in the wireline CPE market and increase customer choice of terminal equipment at lower cost. Those objectives have already been accomplished in the wireless market without the need for regulatory intervention. Customers currently enjoy a variety of handset options from numerous carriers, including free handsets, and handset manufacturers vigorously

⁹³ See Jonathan E. Neuchterlein and Philip J. Weiser, *Digital Crossroads: American Telecommunications Policy in an Internet Age* at 58 (2005).

⁹⁴ Wireless Net Neutrality at 30.

⁹⁵ See Section II, *supra*.

compete to offer the most innovative and cutting edge products and services to wireless customers.⁹⁶

Unlike manufacturers of the *Carterfone* and other wireline CPE seeking to compete against AT&T and Western Electric, handset manufacturers do not require government intervention in order to compete or innovate. In fact, the wireless industry has been at the forefront of bringing new and innovative services to the market. Carrier innovations have occurred in the services that carriers offer to customers and within carriers' networks. Innovations like T-Mobile's test marketing of an integrated voice solution using both CMRS networks and Wi-Fi exemplify this type of network based innovation.⁹⁷ Integration of CMRS and another communication network is nothing new to Skype. Last year, Skype entered into a commercial agreement with Hutchison 3 Group to offer Skype services on mobile devices in several countries in Europe and the Far East.⁹⁸ The service, supported by both Skype and Hutchison 3, is provided over the carriers' existing architecture in a way that benefits both the carrier and Skype. There is simply no reason that a wireless carrier in this country could not enter into a similar commercially-beneficial arrangement with Skype. In

⁹⁶ For example, LG Electronics, a leading manufacturer of wireless handsets, recently announced a "global collaboration" with Google by which Google service, including Google Maps, Gmail, and Blogger Mobile, will be preloaded on LG's handsets. Press Release, LG Electronics and Google Team Up to Enhance the Mobile Experience (March 28, 2007) *available at* http://www.lge.com/about/press_release/detail/PRO|NEWS^PRE|MENU^PRER|MENU_20357_PRE|MENU.jhtml.

⁹⁷ See "The Only Phone You Need," *supra*, note 18.

⁹⁸ Press Release, *Skype and Hutchison 3 Group Join Forces to Offer Skype of Mobile Devices* (Feb. 14, 2006), *available at* http://skype.com/company/news/2006/skype_hutchison.html.

fact, even in the absence of such an agreement, Skype's software runs on multiple wireless devices in the United States.⁹⁹

E. Wireless Is a Shared Resource and Therefore Falls Into a Category of Service That Part 68 Excludes From Connection Rules

Another critical difference between the wireless market and the traditional wireline world is the fact that wireless spectrum is a shared resource. In *Carterfone* the Commission allowed users to connect equipment of their choosing to AT&T's network – so long as it does not harm the network at large. This decision was premised on the conclusion that consumer use of CPE would only risk degradation of their own service and not the services received by other subscribers on the network.

However, wireless is a shared network medium. Thus, unlike traditional wired broadband where each user has a dedicated pipe to their home, the wireless user must share the available bandwidth with all other users – both voice and data users – in their vicinity.¹⁰⁰ Poor handset performance, both in terms of voice and data service, can result in fewer connections per cell, or the need for increased cells to maintain system capacity.¹⁰¹

In its Petition, Skype lauds the era of innovation at the network edge brought about by the adoption of the *Carterfone* principles and the subsequent Part 68 rules.¹⁰² Allowing users to connect equipment of their choosing – so long as it doesn't harm the

⁹⁹ See “Go mobile with Skype,” SKYPE.COM, *available at* <http://www.skype.com/download/skype/mobile> (last accessed Apr. 24, 2007).

¹⁰⁰ See Jackson Paper at § 3.1.1.

¹⁰¹ *Id.*

¹⁰² Skype Petition at 9-10.

network at large – enabled AT&T subscribers to use the CPE of their choosing. This decision was premised on the conclusion that consumer use of CPE would only risk degradation of their own service and not the services received by other subscribers on the network. Wireless, however, is a shared resource, and as such should not be considered to be analogous to the wireline world.

Part 68 of the Commissions’ rules state, in relevant part:

[T]he [Part 68] rules and regulations apply to direct connection of all terminal equipment to the public switched telephone network for use in conjunction with all services *other than party line services*.¹⁰³

In excluding party lines from the rules relating to connection of devices, the Commission implicitly recognized the restrictions on connection contained in the *Hush-a-Phone* and *Carterfone* cases, that connecting devices be privately beneficial without being publicly detrimental.¹⁰⁴

Wireless service is similar to “party line” service in that the resource being used – then, a wireline circuit, now, radio spectrum – is shared by all those using the service simultaneously. Wireless consumers use spectrum in a complex shared environment where the elements of the network dynamically allocate resources based upon a number of factors including spectral efficiency of the handset, the number of users connected to a cell site, and the particular application for which the handset is requesting spectrum.¹⁰⁵

¹⁰³ 47 C.F.R. § 68.2(a) (emphasis added).

¹⁰⁴ *Hush-a-Phone Corp. v. U.S.*, 238 F. 2d 266, 268-69 (DC App. 1956); *In re Use of the Carterfone Device and Message Toll Telephone Service*, Decision, 13 FCC 2d 420 (1968) (“Carterfone”).

¹⁰⁵ See Jackson Paper at 3.1.

Although wireless users are not actually sharing a call, the resource is shared, and when one wireless user has a less efficient handset than the rest of the network, the entire network suffers. By subjecting all wireless users to the experimentation of the few subscribers interested in alternative devices, application of the Part 68 connection rules to the wireless world acts to the detriment of all users.

In order to maintain maximum efficiency over a wireless connection, some carriers prevent their consumers from using applications that require abnormally large amounts of bandwidth or near-constant connections to the network, such as streaming media and peer-to-peer (“P2P”) services. Streaming media, be it audio or video, require large amounts of bandwidth over potentially long periods of time. P2P services also require large amounts of bandwidth to transfer information but are particularly troublesome because peer-to-peer services need to use the connection to the Internet when they are idle as well as when they are active.

Since the Napster decision, P2P services have increasingly relied upon distributed databases to maintain the presence of users and material on their networks.¹⁰⁶

Distributed databases use all of the connected users as nodes of the network and send each other signals to indicate when users “near” them in the network have logged-in, logged-out, or have initiated a transfer of some sort.¹⁰⁷

Skype’s particular brand of VoIP makes use of a similar distributed database. A study of the Skype protocols was done by the Computer Science department of Columbia

¹⁰⁶ See *A&M Records, Inc. v. Napster, Inc.*, 284 F. 3d 1091 (C.A.9 2002).

¹⁰⁷ See *e.g.*, Salman A. Baset and Henning Schulzrinne, “An Analysis of the Skype Peer-to-Peer Internet Telephony Protocol”, Columbia University, Sept. 15, 2004 (“Skype Technical Analysis”).

University to determine how the Skype network operates.¹⁰⁸ Skype's network maintains a series of "supernodes" with nodes attached to each supernode. In this type of network architecture, nodes (all hardware running the Skype client) are automatically promoted to supernodes if the network resources exist to support the promotion.¹⁰⁹ Supernodes are the backbone of the Skype network, constantly exchanging data to maintain Skype's database of network presence and status. This exchange of data occurs without interaction with the user, and is near constant if the client is a supernode.

It is unknown if the Skype mobile client contains similar code mandating supernode status for clients with sufficient network resources. However, regardless of whether the code exists or not, this type of network use is precisely why carriers maintain a review process for handset applications. The Skype client, without the provisions for making handsets supernodes, might be an acceptable use of network resources to some carriers. Skype is free to partner with American wireless carriers to do just that, but offers no evidence that it has even tried to work with carriers. Instead, Skype seeks to bypass legitimate, reasonable carrier practices in the name of its own particular model of how mobile voice service should work.

This situation is exemplified by the ongoing problem that wireless subscribers have with illegal repeaters and jammers.¹¹⁰ CTIA has long held that the use of devices not tested and approved by carriers is potentially detrimental to all consumers.¹¹¹ The

¹⁰⁸ *Id.*

¹⁰⁹ *Id.* at 1.

¹¹⁰ *See generally* WT Docket No. 03-264.

¹¹¹ *See* Letter from Paul W. Garnett, Assistant Vice-President, Regulatory Affairs, CTIA, to Ms. Marlene Dortch, Secretary, Federal Communications Commission, WT

CTIA White Paper specifically documented the widespread availability of cellular repeaters, documented cases of interference caused by the unauthorized use of repeaters, and identified potential problems that repeaters can cause with E-911 location positioning.¹¹²

The problems that CTIA cites with respect to illegal repeaters are potential problems with handsets that do not meet carriers' standards. Carriers spend billions of dollars on network investment, ensuring that the network elements work in tandem with handsets to provide not only the highest quality of voice and data service, but also to ensure that handsets will work most efficiently when it matters most.

Network-based E-911 location systems require precise calculations of field strength and signal timing in the network to accurately estimate the location of subscribers. By operating unknown and uncontrolled devices on a wireless network, this delicate network balance is disrupted and disables the ability of the network provider to ensure that it can locate subscribers with the specified degree of accuracy. Therefore, more than simply disrupting routine wireless communications, untested and unapproved devices that are not managed by carriers can adversely affect the public safety of wireless subscribers regardless of whether the device is operating as intended or if it is malfunctioning.¹¹³

Docket 03-264 (dated May 15, 2006); "White Paper On The Harmful Impacts Of Unauthorized Wireless Repeaters," CTIA, (filed in WT Docket 03-264 on May 15, 2006) ("CTIA White Paper").

¹¹² *Id.*

¹¹³ *See* Jackson Paper at § 6.2.

Skype argues that handset standards will allow manufacturers to build to a specific standard and innovate “without permission” from the carriers.¹¹⁴ However, standards setting only ensures the minimum level of efficiency, removing incentives for handset manufacturers to increase either spectral efficiency or network management features. For example, in late 2004, CTIA filed tests performed by independent laboratories on PCS handsets being sold in the marketplace.¹¹⁵ The handsets tested, on average, were able to pick up signals half as strong as the standards mandated. These more efficient handsets enable carriers to serve more customers per cell site, which in turn benefits consumers through better service and lower costs.

VI. NON-DISCRIMINATORY BUNDLING OF CPE WITH WIRELESS SERVICE HAS HELPED, NOT HARMED, CONSUMERS

Skype urges the Commission to revisit its 1992 decision allowing wireless carriers to bundle handsets with plans for wireless service, citing changes in the marketplace and harm to consumers.¹¹⁶ In 1992, the wireless industry had 10 million customers and was still a duopoly. In response to a petition filed by cellular resellers, the Commission considered a number of factors and the ability of carriers to bundle service. The Commission’s well reasoned conclusion after analyzing the handset market in 1992 was that the benefits to consumers far outweighed the potential for anticompetitive

¹¹⁴ Skype Petition at 13.

¹¹⁵ See Comments of CTIA – The Wireless Association, ET Docket No. 00-258, at Attachment (filed Dec. 8, 2004).

¹¹⁶ Skype Petition at 20-24.

effects.¹¹⁷ Despite Skype's contentions to the contrary, the Commission's analysis is as apt a description of the economic benefits to consumers today as it was 15 years ago.

A. Bundling Handsets With Wireless Service Allows All Consumers to More Quickly Benefit From New and Improved Service Offerings

In its analysis of the state of the marketplace in 1992, the Commission looked at both the handset market and the market for service. The Commission concluded that it was “uncontroverted” that the market for wireless CPE was “extremely competitive” in 1992.¹¹⁸ Since then, the market for CPE has continued to evolve, and currently there are now more handset manufacturers and more models available.¹¹⁹ Indeed, there now are about 700 mobile wireless handsets available to consumers in the U.S. When it looked at the market for service, the Commission tentatively concluded that the market was “sufficiently competitive” to prevent any carrier from exercising undue market power over handset manufacturers.¹²⁰ This finding is especially significant when put into the context of the wireless market at the time. Even in the federally mandated duopoly, where government regulation represented a complete entry barrier, the Commission found that carriers were unable to exercise effective control over handset manufacturers. With twice as many carrier competitors now present in almost every county in the United

¹¹⁷ See generally CPE Bundling Order.

¹¹⁸ *Id.* at ¶¶ 8-9.

¹¹⁹ See Section II, *supra*.

¹²⁰ CPE Bundling Order at ¶¶ 10-11.

States, wireless carriers are now less, not more, likely to exercise control over handset manufacturers.¹²¹

Skype's claims that companies that want to produce handsets in the wireless space must "play ball" with major wireless carriers is disproved by the Apple and AT&T iPhone announcement.¹²² Apple, a computer and media company with no existing telecommunications properties, decided to enter the wireless handset market and began negotiations with Verizon Wireless to be the exclusive carrier of its product.¹²³ Introduction of Apple's iPhone required changes to existing wireless networks to support services that Apple intended to include in its handset offering, particularly changes with respect to how wireless networks handle voicemail.¹²⁴

However, in a complete inversion of the description Skype offers of the wireless handset market, Apple placed conditions on the licensing of its handset. Apple, a non-player in the wireless telecommunications market, demanded an unprecedented amount of control over nearly every aspect of the handset, including the retail price.¹²⁵ If

¹²¹ Manufacturers also have a number of MVNOs available as a vehicle for entering the U.S. handset market.

¹²² See iPhone Exclusively from Apple and Cingular, CINGULAR.COM, *available at* http://www.cingular.com/cell-phone-service/specials/iPhone.jsp?source=IC9801j02R00n300&WT.mc_id=IC9801j02R00n300 (last accessed Apr. 7, 2007).

¹²³ See Musgrove, Mike, "Apple Seeks to Muscle Into Telecom With iPod Phone", Washington Post, at D1 (Jan. 10, 2007).

¹²⁴ "Apple Chooses Cingular as Exclusive US Carrier for Its Revolutionary iPhone", APPLE.COM, *available at* <http://www.apple.com/pr/library/2007/01/09cingular.html> (last accessed Apr. 19, 2007).

¹²⁵ Amol Sharma, Nick Wingfield & Li Yuan, *Apple Coup: How Steve Jobs Played Hardball in iPhone Birth*, Wall St. J., Feb. 17, 2007, at A1; "Cingular: The iPhone Price

one believes Skype's characterization of the wireless handset market, Verizon Wireless's unwillingness to meet Apple's terms for distribution of the iPhone should have resulted in Apple's capitulation to Verizon Wireless's demands or the iPhone never coming to market. However, rather than accept Verizon Wireless's terms, Apple took its ideas to Cingular Wireless, a party which – even though the largest wireless carrier in market share – was willing to accept Apple's terms. Cingular is now the exclusive distributor of Apple's iPhone. This situation is the antithesis of Skype's contentions.

B. Prohibiting CPE Bundling Removes Carrier Incentives to Upgrade Networks, Stifling Innovation

One key to wireless carriers' innovation has been their ability to make systemic changes to their networks, thereby enabling new and innovative services to be brought to market more quickly. Skype's Petition incorrectly characterizes a number of wireless carrier practices – handset locking, CPE bundling, application oversight – as preventing consumers from realizing the maximum benefit of continued network innovation. The reality is that these practices not only ensure that consumers benefit from advances in handset development, but they also enable the carriers – and all of the entities with which they do business – to continue to benefit from investment in their networks.

As carriers bring more and more services to their consumers, it is important that the carriers' networks be able to not only carry the load generated by each new service, but to do so in a timely, efficient way that ensures consumers the quality of service

Is Right", UNSTRUNG.COM, Jan. 11, 2007, *available at* http://www.unstrung.com/document.asp?doc_id=114442 (last accessed Apr. 19, 2007).

they've come to expect from their wireless providers.¹²⁶ To that end, carriers continually invest in their network infrastructure. Carriers have invested more than \$223 billion in state-of-the-art communications networks and continue to do so to improve coverage, service quality, and speeds available to their consumers.¹²⁷

Other innovations in wireless that have occurred in both handsets and in the network have enabled Americans to have unprecedented access to their personal data and to connect to others. As discussed above, technological innovations by carriers include location based services,¹²⁸ messaging services,¹²⁹ and mobile Internet access to name a few. None of these features would be possible without network elements working together with handsets to provide these advanced services to the consumer.

The Commission also recognized the importance that bundling CPE with service has on carriers' ability to transition from one technology to the next. At the time of the CPE Bundling Order, the wireless industry was in the midst of the transition from all analog to hybrid analog/digital networks.¹³⁰ The CPE Bundling order recognized both

¹²⁶ See Wireless Net Neutrality at 24 ("Because the operator manages [the equipment] relationship with the customer, the operator should be able to impose requirements on upstream suppliers that ensure high quality of service.").

¹²⁷ CTIA Wireless Quick Facts: December 2006, CTIA – The Wireless Association®, *available at* http://www.ctia.org/media/industry_info/index.cfm/AID/10323 (last accessed Apr. 18, 2007) (combining "Total Cumulative Capital Investment as of Year-End 2005" with "Incremental Capital Investment in 2006").

¹²⁸ See e.g., "Buddy Beacon", Helio Wireless, *available at* http://www.helio.com/#services_gps (last accessed Apr. 19, 2007).

¹²⁹ Short Message Service, Multimedia Message Service and Common Short Codes to name a few.

¹³⁰ CPE Bundling Order at ¶¶ 20-21.

the value of promoting the evolution of wireless standards, and the necessity of ensuring that consumers have access to the CPE needed to access digital networks.¹³¹

Bundling of CPE is particularly beneficial to lower income customers. CPE bundling has allowed carriers to subsidize the cost of handsets, making new technology available to those consumers who otherwise would not be able to afford the up-front costs of new handset technology. The Commission recognized this important fact in the context of the transition from analog technology to dual-mode and all-digital technology at the time of the CPE Bundling Order.¹³² Skype recognizes the high cost of wireless CPE in its Petition, as well. Skype cites the high cost of investment in handsets as a reason to prevent CPE Bundling, when in reality CPE Bundling and other carrier practices that enable bundling have dramatically reduced the cost of handsets for consumers, including low-income consumers.¹³³

Skype derides early termination fees and handset locking as anti-consumer, alluding to these practices as a market failure necessitating regulatory intervention.¹³⁴ However, rather than harming consumers by preventing them from “retain[ing] their handsets from one service to another[,]” these practices enable consumers to purchase more advanced CPE at a lower cost.¹³⁵ Carriers that subsidize the cost of CPE expect to recoup the cost of the handset over the course of the customer contract. By spreading the

¹³¹ *Id.* See also Antitrust Perspective at 6.

¹³² CPE Bundling Order at ¶ 20.

¹³³ Skype Petition at 16.

¹³⁴ *Id.* at 16-17.

¹³⁵ *Id.* at 16.

true cost of the device over the term of the contract – typically one to two years – consumers enjoy much lower up-front CPE costs and, at times, no up front charge for the CPE at all.

These practices also enable consumers to take advantage of the newest technologies earlier by providing incentives for them to upgrade their handsets. According to J.D. Power and Associates, the average replacement time for a wireless handset is 16.6 months.¹³⁶ Although Skype claims that many consumers would like to be able to take their handsets with them, many – some would argue the majority of – consumers don't keep their phones beyond their contract period. In short, CPE bundling accelerates, not stifles, the pace of technological change.

VII. CONCLUSION

Skype's Petition self-servingly attempts to make the case that wireless is an anti-competitive, anti-consumer industry in need of regulatory action. However, Skype offers no evidence that wireless is failing to react to the demands of the competitive market, only that the wireless industry fails to share Skype's vision of what the industry should be. Rather than attempt to compete with its version of voice service on the open market, Skype seeks to have the Commission mandate that the market give its model a chance where consumers seemingly aren't interested.

Skype presents solutions to problems that don't plague the wireless industry and suggests remedies that would neither benefit consumers nor the market, but rather inure their benefit to Skype. The Commission should dismiss Skype's self-serving Petition as

¹³⁶ "J.D. Power and Associates Reports: Sony Ericsson Ranks Highest in Mobile Phone Customer Satisfaction", JDPOWER.COM, *available at* <http://www.jdpower.com/corporate/news/releases/pressrelease.asp?ID=2006251> (last accessed Apr. 18, 2007).

it not only fails to cite a legitimate market failure in the wireless market, but also fails to consider the true demands and interests of wireless consumers.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I, Korto Dunbar, do hereby certify that on this 30th day of April 2007, I caused copies of the foregoing “CTIA – The Wireless Association® Opposition” to be delivered to the following via First Class U.S. mail or email:

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